

DELAWARE PEDESTRIAN COUNCIL



2019 ANNUAL REPORT

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EXECUTIVE SUMMARY

The Delaware Advisory Council on Walkability and Pedestrian Awareness (hereinafter referred to as “Pedestrian Council”) was reestablished on October 12, 2015, to address concerns related to the high number of pedestrian fatalities; lack of awareness about pedestrian laws; and the desire to improve the walkability of the state.

The Pedestrian Council, together with its three subcommittees – Built Environment, Education and Enforcement, and Legislative and Policy – was charged with advising the Secretary of the Delaware Department of Transportation (DelDOT) on making walking a safe, convenient, efficient, and comfortable means of transportation.

Unfortunately, despite concerted efforts by the Pedestrian Council and other concerned organizations, pedestrian deaths continued to rise not just in Delaware but also across the country. The Governors Highway Safety Association (GHSA) reported in March 2020 that last year’s pedestrian deaths in the U.S. were the highest in 30 years. Refer to <https://www.ghsa.org/resources/Pedestrians20> for the full report.

A total of 32 pedestrians were killed along Delaware roadways in 2019. This was an increase from 2018 when 24 pedestrians died. Of the 32 fatalities, 21 took place in New Castle County; 4 in Kent County; and 7 in Sussex County.

Despite this setback, the Pedestrian Council and its subcommittees continued to persevere and explore ways to curb pedestrian fatalities in Delaware. They met a total of 15 times in 2019.

PEDESTRIAN DEATHS

Table below shows the percentage of pedestrian deaths against total traffic deaths in Delaware for the years 2007 through 2019. According to the same GHSA Report, the national average in 2018 was 17%.

Year	Total Traffic Fatalities	Pedestrian Fatalities	Pedestrian Deaths as Percentage of Total Traffic Deaths
2007	118	15	12.7
2008	122	22	18.0
2009	118	15	12.7
2010	103	22	21.4
2011	103	19	18.4
2012	116	30	25.9
2013	101	26	25.7
2014	125	27	21.6
2015	133	36	27.1
2016	120	27	22.5
2017	118	34	28.8
2018	111	24	21.6
2019	132	32	24.2

HIGHLIGHTS OF 2019

1 Pedestrian Safety Awareness Month

This was the third year that the Pedestrian Council worked with the Office of Governor John Carney Jr. to declare October as Pedestrian Safety Awareness Month.

In 2017, the Pedestrian Council chose the month of October because Delaware usually sees a spike in pedestrian fatalities in October as the days begin to get shorter and pedestrians become more vulnerable on the roads. October is also the month designated for Walk to School Day (1st Wednesday of October) and White Cane Day (October 17th).

Pedestrian Council and Subcommittee Members met with Governor Carney on October 31, 2019 to discuss pedestrian-related issues in Delaware.

2 Partnership with Homeless Shelters

Education and outreach continued to be a top priority for the Pedestrian Council in 2019.

Recognizing that most homeless or transient individuals are walkers, and that a number of pedestrian fatalities were homeless or transient individuals, the Education and Enforcement Subcommittee of the Pedestrian Council started partnering with homeless shelters in the state to conduct pedestrian safety events.

Subcommittee members, together with officers from the Delaware State Police (DSP) visited the Sussex Code Purple in Seaford on October 3rd and the Dover Interfaith Mission for Housing on October 10th to talk to homeless individuals about safety tips while walking and driving. The Seaford Police Department was also present in the Sussex event.

Talking to the homeless provided valuable insights for future outreach endeavors. Subcommittee Members found out that the homeless favor wearing dark colored clothing at night because they want to blend in with the environment while looking for a place to sleep. If someone wants to reach out to them during the day when shelters are closed, many are at libraries and transit centers.

Below and right: Reflective materials were distributed at homeless shelters.

Bottom: Meeting with Governor Carney.



Reflective materials were distributed at the events to provide extra visibility to the people when walking, especially at night.

3 Targeted Outreach

Following the lead of the Office and Highway Safety (OHS), the Education and Enforcement Subcommittee started conducting targeted outreach along high pedestrian fatality corridors. The first event was conducted in front of Goodwill-Claymont along Philadelphia Pike on October 17th where Subcommittee Members talked to passing pedestrians on how to be safe.

Philadelphia Pike has a history of high pedestrian crashes and fatalities. In 2019 alone, two pedestrians died along this corridor. In the three hours that Subcommittee Members were there, they witnessed at least 35 pedestrians crossing midblock on Philadelphia Pike near the intersection of Harvey Road.

DelDOT completed a pedestrian audit of Philadelphia Pike in 2019 and recommended some short-term fixes including additional crossing signs, lighting, and restriping crosswalks. As a long-term solution, a road diet is recommended.



Law enforcement officers at the Dover event.

4 Walking Ambassadors

One focus of the direct interaction with the public at safety events was spreading the word about the number of pedestrian fatalities and safety tips.

The majority of people who stopped at the events were astonished to find out that 22% to 28% of the annual traffic fatalities in Delaware are pedestrians.

They expressed a willingness to talk to friends, family and fellow walkers on how to walk safely such as: cross at crosswalks or cross roads with signals; take the time to cross safely; when walking at night, use a flashlight or reflective items; use sidewalks



when available; and when there are no sidewalks, walk facing traffic on the shoulder of the roadway as far from the lanes of travel as possible.

5 Reflective Items

Seventy percent of pedestrian deaths in Delaware occurred under dark conditions. A study conducted by Federal Highway Administration (FHWA) in 2011 showed that using retro-reflective materials at night is very important and that wearing white clothing is not enough.

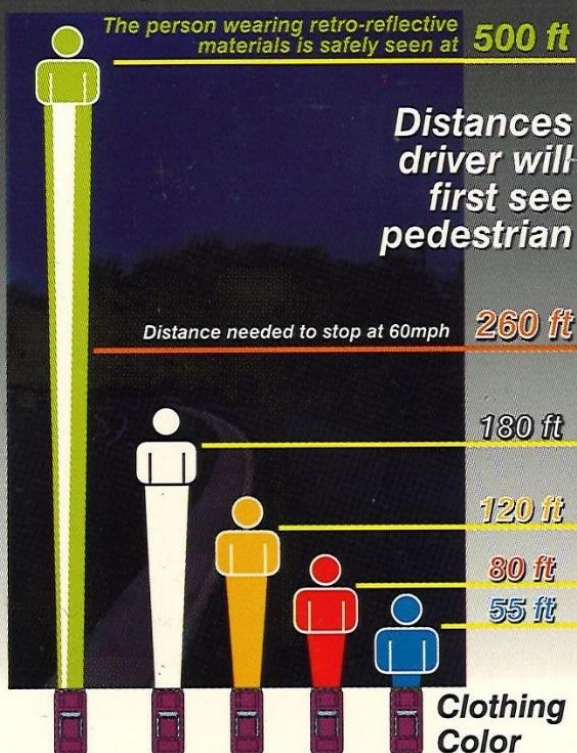
The study showed that pedestrians wearing white or light-colored clothing are not visible to drivers until they are well within 200 feet. A driver travelling at 60 MPH

needs 260 feet to stop safely. Pedestrians wearing dark colored clothing at night are first seen at a distance of 55 feet – giving drivers less than one second reaction time.

Reflective materials are more visible at night because instead of absorbing light, they reflect light back. Pedestrians wearing reflective materials can be first seen at 500 feet.

The Pedestrian Council purchased reflective materials that were handed out at the pedestrian safety events. Some were also given to law enforcement officers for handing out to pedestrians walking at night.

Distances of Nighttime Visibility Wearing White is NOT Enough!



- A study conducted by FHWA showed that wearing white while walking at night is not enough. Photo on the left courtesy of FHWA.
- Reflective materials are more visible because instead of absorbing light, they reflect light back.

6 Data on Pedestrian Facilities

Although DelDOT maintains a GIS-based sidewalk layer, they only have data for state-maintained roads and not for municipal, county and other local roads. The Built Environment Subcommittee (whose membership includes Wilmapco, Dover/Kent MPO, Sussex County, etc.) is working with DelDOT to consolidate and update all available data related to pedestrian facilities.

The goal is to have a map of all pedestrian facilities across the state and use that to identify network gaps and rank them for construction.

7 Local Pedestrian Plans

Walking is the most basic form of transportation. It is the responsibility of the government to provide the public with safe, efficient and accessible transportation.

The Built Environment Subcommittee plans to reach out and help municipalities develop their pedestrian plans that will include an inventory of their existing pedestrian facilities and how that network will be expanded in the future.



NEXT STEPS



1. Make the following recommendations to the Office of the Governor:
 - Rename the Council from “Advisory Council on Walkability and Pedestrian Awareness” to “Pedestrian Council”;
 - Include other agencies and organizations in the Pedestrian Council such as the Office of State Planning, Delaware State Police, League of Local Governments, Bike Delaware, etc.; and
 - Expand the charge of the Pedestrian Council to include giving recommendations to other agencies, not just DelDOT.



2. Evaluate the goals of the Pedestrian Council to determine if they are being met. The goals of the Council are outlined in Executive Order 54.



3. Evaluate the Delaware State Pedestrian Action Plan.

4. Conduct more pedestrian safety events.



PRESENTATIONS TO THE PEDESTRIAN COUNCIL

To keep abreast of pedestrian related issues, policies and projects, the Pedestrian Council invited presenters to its meetings.

DelDOT's Sidewalk Committee by Jim Pappas, Transportation Solutions, DelDOT

DelDOT's Sidewalk Committee was created by Secretary Jennifer Cohan on March 28, 2018. The goal of this committee was to accelerate transition to a fully connected pedestrian network by coordinating projects and programs across the agency that fund, plan, design, construct, or maintain pedestrian facilities within the state right-of-way. There are 17 DelDOT programs statewide that involve sidewalks.

It provided a forum for strategizing the best way to implement sidewalk improvement projects including identifying shared priorities and leveraging funds across programs.

Committee members were a cross-section of the agency, namely, representatives from: ADA Coordination, Community Transportation Fund Program, Delaware Transit Corporation, Development Coordination, Finance, Maintenance & Operations, Office of Performance Management, Pave & Rehab Program, Pedestrian Access Routes Program, Pedestrian Coordination, Planning, Project Development, Public Works, Transportation Alternatives Program, and Traffic.

To view the full presentation, visit https://deldot.gov/Programs/pedestrian_council/pdfs/2019/Jan/SidewalkCommittee.pdf?cache=1585582569174

Review of the 2018 Governors Highways Safety Association Pedestrian Fatalities by Farzana Atique, Ph.D., P.E., McCormick Taylor Associates

Ms. Atique provided the Pedestrian Council an in-depth review of the GHSA *Pedestrian Traffic by State: 2018 Preliminary Data* released February 28, 2019. The full report is available at https://www.ghsa.org/sites/default/files/2019-02/FINAL_Pedestrians19.pdf

The report provided the following key findings:

- GHSA estimates the nationwide number of pedestrians killed in motor vehicle crashes in 2018 was 6,227, an increase of 4% from 2017.
- From 2008 to 2017, the number of nighttime pedestrian fatalities increased by 45%.
- 72% of pedestrian fatalities in 2017 occurred midblock (26% occurred at intersections).
- Roadway Type: About 60% of pedestrian fatalities occur on local streets and state highways (16% US Highways, 10% Interstates).
- Alcohol impairment for the driver and/or pedestrian was reported in about half of traffic crashes.

Recommended strategies:

- Targeted law enforcement efforts
- Public information campaigns
- Educational outreach in high-risk areas
- Safe Routes to School Program
- Focusing enforcement in high risk zones
- Pedestrian safety assessments/road safety audits
- Support for engineering countermeasures

To view the full presentation, visit https://deldot.gov/Programs/pedestrian_council/pdfs/2019/Apr/ReviewofGHSAPedestrianFatalitiesAnnualReport.pdf?cache=1585582781577

US13 (Kent County) Pedestrian Safety Audit and E-Crash Pedestrian Origin-Destination Data Analysis by Adam Weiser, P.E., [Whitman Requardt Associates](#)

The **US13 Pedestrian Safety Audit** will be the first pedestrian safety audit in Kent County. The 5.5-mile study area is from Scarborough Road to Puncheon Run Connector.

It is classified as an urban minor arterial roadway. From Scarborough Road to Bay Road consists of a 6-lane divided roadway while Bay Road to Puncheon Run Connector consists of a 4-lane divided highway. The speed limit within the corridor varies from 35 MPH to 50 MPH. Some of the major pedestrian generators include Delaware State University, Wilmington University, Dover Downs Racetrack and Casino and Dover Mall.

Pedestrian counts were conducted in October and November of 2018. There were 52 pedestrian crashes and 34 bike crashes along the corridor from January 2008 to December 2018, of which there were 9 pedestrian fatalities and 2 bicycle fatalities.

Spikes of crashes occurred around noon and then again from 4:00 PM to 12:00 AM. High pedestrian and bicycle crashes also occurred during weekends.

Some of the proposed improvements include filling in sidewalk gaps throughout the corridor, reducing lane widths and consideration of a road reconfiguration, coordinating with the Delaware Transit Corporation (DTC) for assessment of bus stops, additional signalized pedestrian crossings and potential barriers to minimize uncontrolled midblock crossings.

The next steps will include coordination with DTC and the Dover Police Department. The study is expected to be completed by the end of 2019 and will be presented to the stakeholders in early 2020.



The US13 (Kent County) Pedestrian Safety Audit recommends filling in sidewalk gaps.

E-Crash Pedestrian Origin-Destination

Data. WRA reviewed 48 fatal pedestrian crashes from 2017 and 2018. Origin and destination information were provided in 20 records, origin only in 7 crash reports, and no information in the remaining 12 records.

The available origin and destination data and crash locations were plotted using Google Earth to see if conclusions could be drawn from the data. For example, one crash location was on Philadelphia Pike, south of Holly Hill Road. Origin noted in the report was that the pedestrian exited a DART bus on Philadelphia Pike. The pedestrian ran across the roadway to catch another DART bus when the pedestrian was struck.

The information was useful as the analyst was aware why the pedestrian crossed midblock, and countermeasures can focus on crossing locations where bus stops are located. Bus stop relocation can also be considered.

The following are some proposed recommendations to improve compliance and data reliability:

- Changing the name of the data fields to “Origin” and “Apparent Destination”
- Providing Tool Tip within E-Crash for each field
- Providing additional law enforcement training
- Preparing one-page training handouts to officers
- Continuing to review data trends and monitoring data quality



Pedestrians cross US13 at the intersection of Boulden Boulevard in New Castle County.

[Auto Technology and Pedestrian Safety by Ken Grant, Public and Government Affairs Manager, AAA Mid-Atlantic](#)

One vehicle feature being promoted these days is the pedestrian detection system. The thought process is that if a vehicle has this system, the driver can relax and not be concerned about pedestrians as the car will take care of it. AAA conducted a study to see how these systems are working and the results were not encouraging.

AAA conducted the research with the Automotive Club of Southern California's Automotive Research Center in Los Angeles, California. The testing was conducted in Fontana, California, using test dummies.

Four commercially available vehicles were selected for testing the capabilities of pedestrian detection systems: 2019 Chevy Malibu, 2019 Honda Accord, 2019 Tesla Model 3 and 2019 Toyota Camry. Below are some of the findings of the tests:

- When encountering a child darting from

between two cars, with the vehicle traveling at 20 MPH during daytime, a collision was avoided only 11 percent of time.

- Following a right-hand turn, all the test vehicles collided with the adult pedestrian.
- When approaching two adults standing alongside the road, with the vehicle travelling at 20 MPH, a collision was avoided only 20 percent of the time.
- At night, the systems failed as none of them detected or reacted to the adult pedestrians.

Mr. Grant noted that the results were not encouraging. AAA's message is that even though marketing is showcasing these new features, drivers still need to be cautious and alert and not rely solely on technologies that still require a lot of improvement.

To view the full presentation, visit https://deldot.gov/Programs/pedestrian_council/pdfs/2019/Oct/PedestrianDetectionSystems.pdf?cache=1585583903179

SUBCOMMITTEE SUMMARIES

Three subcommittees were established in order to address focus areas. Chairs of the subcommittees asked stakeholders and subject matter experts to meetings in order to provide additional input to the Pedestrian Council.

Built Environment Subcommittee

The Built Environment Subcommittee was created with the purpose of identifying and recommending engineering, infrastructure, land use, and transit strategies to meet the following goals:

- Identify gaps in the system of pedestrian paths and sidewalks to create continuous, interconnected pathways;
- Provide advice regarding design standards for crosswalks, sidewalks, and pathways, ensuring ADA compliance;
- Provide advice regarding accessibility and connectivity to make transit a more viable option for Delaware citizens;



- Assist DeIDOT with re-evaluation, implementation, and recommendations regarding the Statewide Pedestrian Action Plan and prioritization of pedestrian infrastructure improvements.

The Built Environment Subcommittee met four times in 2019.

[Education and Enforcement Subcommittee](#)

The Education and Enforcement Subcommittee was created to identify and recommend pedestrian safety education and enforcement strategies towards meeting these goals:

- Develop strategies for pedestrian safety, education, and awareness;
- Assist DeIDOT with re-evaluation, implementation, and recommendations regarding the Statewide Pedestrian Action Plan.

The subcommittee met four times in 2019 and conducted three public outreach events across the state.

[Legislative and Policy Subcommittee](#)

The Legislative and Policy Subcommittee was created to identify and recommend specific strategies regarding legislation or policies including:

- Review traffic rules to help support a safe pedestrian environment;

- Provide advice regarding implementation of DeIDOT's Sidewalk and Multi-Use Path Maintenance Policy;
- Assist DeIDOT with re-evaluation, implementation, and recommendations regarding the Statewide Pedestrian Action Plan.

The Legislative and Policy Subcommittee met three times last year and discussed data analysis of fatalities and injuries to see if there is a pattern. They also examined Executive Order 54 and recommended some changes.

2019 PEDESTRIAN COUNCIL MEMBERS & ALTERNATES

Chair John McNeal, State Council for Persons with Disabilities

Co-Chair Jessica Welch, Appointed by the Governor

Secretary Jennifer Cohan
Deputy Secretary Nicole Majeski, DeIDOT

Secretary Shawn Garvin
David Bartoo, DNREC

Secretary Jeffrey Bullock
Douglas Denison, DOS

Secretary Robert Coupe
Richard Klepner, DSHS

Secretary Kara Odom-Walker
Helen Arthur, DHSS

Secretary Susan Bunting
Michael Wagner, DOE

John Sisson
Tigist Zegeye, WILMAPCO

Mayor Robin Christiansen
Reed Macmillan, Dover-Kent MPO

Todd Lawson
Lauren Devore, Sussex County

David Morris
Louie Phillips, American Heart Association

Todd Webb, DelDOT ADA Title II
Coordinator

Marsha Carson, DOS ADA Title II
Coordinator

William Jiron Jr., Appointed by the
Governor

Ken Grant, AAA

William Payne, Care Giver

Jared Kauffman, DTC
Jim Galvin, Dover-Kent MPO
Bernie Gilbert, DelDOT
Mark Luszcz, DelDOT
Paul Moser, DelDOT
William Payne, Care Giver
Tigist Zegeye, WILMAPCO

Education and Enforcement

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Ken Grant, AAA
Richard Klepner, OHS
Peter Haag, DelDOT
Linda Osiecki, DelDOT
Louie Phillips, AHA
Michael Wagner, DOE
Amy Wilburn, Citizen Representative

Legislative and Policy

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2019 SUBCOMMITTEE MEMBERS

Built Environment

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Co-Chair Tom Nickel, DelDOT
David Bartoo, DNREC

APPENDIX

DelDOT's Pedestrian Safety Audit Projects

In 2013, DelDOT's Traffic Section formed the Pedestrian/Bicycle Working Group which was tasked with developing recommendations to improve pedestrian and bicycle safety across the state with a main focus on improving pedestrian safety. The group began performing pedestrian/bicycle safety audits along corridors where there were higher than average rates of pedestrian related crashes, typically multilane divided highways with high levels of commercial land use. Since 2013, 12 audits have been conducted, including two that were conducted prior to the formation of the Pedestrian/Bicycle Working Group. Some audit recommendations have been completed and implemented and others are in either design or planning phase or being considered further. Information regarding each of the pedestrian safety audits can be found on DelDOT's website at https://deldot.gov/Programs/DSHSP/index.shtml?dc=pedestrian_safety. Below is a brief summary of where pedestrian/bicycle road safety audits have been conducted:

Location	Beginning Point	Ending Point	Audit Completed	Summary of Recommendations
US 13	Llangollen Blvd	SR 273	April, 2009	New crosswalks across US 13; additional sidewalk; median fencing; roadway lighting; Capital Project from US 13/US 40 split to Memorial Drive
US 40	Wilton Blvd	US 13/US 40 Split		
SR 273	Library Avenue	US 13	September, 2011	Intersection lighting, additional crosswalks across SR 273; bus stop improvements; additional sidewalk
US 13	SR 273	Market St./Walnut St. Split	August, 2015	New crosswalks across US 13; sidewalk; median fencing; roadway lighting; recommended large capital project.
SR 2	St. James Church Road	SR 141	January, 2015	New crosswalks across SR 2, conversion of half signals to full signals, additional sidewalk, roadway lighting
US 40	SR 72	Buckley Blvd	April, 2019	New crosswalks across US 40, new signal at Rickey Blvd, median fencing, additional sidewalk, roadway lighting

US 13	Puncheon Run Connector	Scarborough Road	April, 2020	New crosswalks across US 13, new signal at DSP HQ, additional sidewalk, median fencing, roadway lighting, bus stop improvements
Philadelphia Pike	Lea Blvd.	DE/PA State Line	January, 2018	Roadway lighting, signing and marking improvements, road re-configuration
SR 1 (Dewey Beach)	Anchor Way	Bayard Avenue	April, 2019	Pedestrian access route improvements, installation of Rectangular Rapid Flash Beacons (RRFB), bus stop improvements
SR 1 (Lewes/Rehoboth Beach)	Dewey Beach	Nassau Bridge	January, 2014	Additional sidewalk, new crossings of SR 1, HAWK signals, roadway lighting
US 202	Rocky Run Parkway	Brandywine Parkway	January, 2017	Pedestrian access route improvements, median fencing, additional signalized pedestrian crossings at existing intersections
SR 48	West Court Drive	North DuPont Road	April, 2016	Pedestrian access route improvements, HAWK signal, bus stop improvements
US 202	Whitby Drive	Rocky Run Parkway	June, 2018	Pedestrian access route improvements, pedestrian improvements at signalized intersections, transit improvements, roadway lighting

Pedestrian safety audits are currently being conducted at the following locations:

- SR 54 (Lighthouse Road) from SR 20 to SR 1, Sussex County
- SR 1 from Dewey Beach to Fenwick Island, Sussex County
- City of Wilmington – this is the first attempt at evaluating pedestrian crashes and recommending pedestrian safety improvements across an entire jurisdiction

Map of DelDOT's Pedestrian Safety Audit Locations

